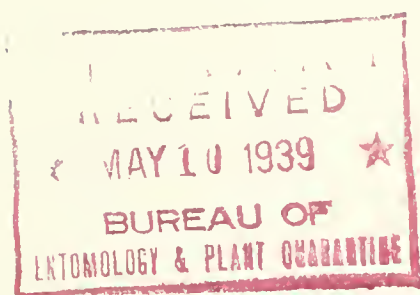


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THE INSECT PEST SURVEY  
BULLETIN



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## THE MORE IMPORTANT RECORDS FOR APRIL

The hatching of economic species of grasshoppers began in the Southwest during the last week in April. An outbreak of Oedaleonctus enigma Scudd. and Melanoplus devastator Scudd. was reported from the San Joaquin Valley of California, and of M. mexicanus Sauss. in the Imperial Valley. In Florida the eastern lubber grasshopper was seriously damaging narcissus in Clay County.

A north African and Indian weevil, Hypera brunneipennis Boh., was found for the first time in North America. Specimens were collected by L. P. Wehrle throughout approximately 15 square miles in the Yuma Valley of Arizona. Report has also been received of specimens having been collected in Imperial County, Calif.

There was a general increase in the larval population of the alfalfa weevil in the San Joaquin Valley of California. Present indications are, however, that the area infested has not increased.

The pea aphid occurred earlier than usual and in rather large numbers throughout the Middle Atlantic and South Atlantic States. It is also reported in eastern Kansas and in parts of Utah and Arizona. In Washington State the first damage reported in 10 years was under way in the Walla Walla district.

The San Jose scale appears to be on the increase in western New York and Georgia.

Emergence of codling moth adults was reported from Alabama on April 4, in the Cornelia section of Georgia on April 24, and in the Yakima Valley of Washington State on April 18. In general throughout the apple-growing sections of the country winter survival is high.

Fruit aphids are generally numerous in the New England, Middle Atlantic, East Central, and West Central States.

The green citrus aphid was occurring in numbers in the upper east-coast citrus-growing section of Florida and is doing considerable damage to oranges in the Orlando section. There is also rather heavy infestation of citrus rust mite in practically all citrus-growing areas of that State.

The Mexican bean beetle first appeared in south-central Georgia on April 11 and on the 18th adults were found in the tidewater sections of Virginia.

The first general movement of the pea weevil from hibernation quarters to the pea fields in the Willamette Valley of Oregon occurred during the third week in April. This is nearly a month earlier than in 1938.

Cankerworms are reported as rather abundant on shade trees in Pennsylvania, Illinois, and Iowa.

Complete defoliation by tent caterpillars is occurring in northern California.

## GENERAL FEEDERS

## GRASSHOPPERS (Acrididae)

- General. W. E. Dove (April 22): Hatching of economic species has begun in Arizona, California, Texas, New Mexico, and Oklahoma. A severe outbreak of Melanoplus devastator Scudd. in the San Joaquin Valley of California is reported and intensive control operations were started during this week. Reports of threatening infestations received from the Yuma Valley, Ariz. Hatching of Dissosteira longipennis Thos. reported to have begun in New Mexico on April 21. Control operations in this area expected to begin on April 25. Although hatching of nonmigratory species in northern Texas and southwestern Oklahoma is reported, control operations probably will not begin before the first of May. A very small hatch reported in Utah. Results of survey examinations show the extent of parasitization and predatorization to remain practically the same as reported last fall. Reduction in numbers of egg pods by natural factors during the winter months is negligible.
- Florida. J. R. Watson (April 22): Heavy infestation of Romalea microptera Beauv. on narcissus in Clay County. Young observed migrating to narcissus fields from a distance of several hundred feet. Only third-stage observed on April 14. Adults observed on April 17 in the southern part of Dade County.
- Michigan. R. Hutson (April 22): Surveys during the last week in Antrim, Charlevoix, Kalkaska, and Ogemaw Counties, in the northern part of the Southern Peninsula, indicate that grasshopper hatching has not yet started in the main infested areas; however, inspection of eggs reveals that development has progressed to a point where warm weather causes hatching.
- North Dakota. J. A. Munro (April 24): Usual reports of overwintered adult and nymphal forms. No hatching of M. mexicanus Sauss. or other economic species observed.
- South Dakota. H. C. Severin (April 24): Eggs had not hatched by April 21. Red mites very active in areas where eggs are abundant; carabid larvae also active.
- Oklahoma. C. F. Stiles (April 24): Reported as hatching in large numbers in Jefferson County. In a few localities young hoppers found present at the rate of 80 per square yard in pasture land in the northern part of Jefferson County and 30 per square yard in the southern part. Crop hoppers, perhaps M. bivittatus Say or M. differentialis Thos., reported as high as 35 per square yard in the southeastern part of Lincoln County.
- Montana. H. B. Mills (April 24): Overwintering grasshopper nymphs have been reported as appearing in considerable numbers in various parts of the State, but to date there have been no verifications of eggs hatching in crops.
- Utah. G. F. Knowlton and F. C. Harmston (April 8): Nymphs reported as hatching out in alfalfa fields at Greenriver, Emery County, and on warm southern slopes in some localities in Box Elder, Tooele, and Utah Counties.
- Nevada. G. G. Schweis (April 24): Reports filtering in that M. mexicanus is hatching in great numbers in Churchill, Washoe, and Lyon Counties. Control measures will be started at once.



California. C. C. Wilson (April 7): First generation of M. mexicanus hatching generally in the alfalfa fields throughout the Imperial Valley. Inspection made on March 22 indicated that in fields irrigated 8 to 10 days previously the hatch ranged from 90 to 100 percent, and nymphs ranged in size from first to third instars. In fields where the fall egg survey showed an average of 13 egg pods per square foot the nymphal population is estimated at 200 per square foot and had already destroyed approximately 25 percent of the first crop of alfalfa.

MORMON CRICKET (Anabrus simplex Hald.).

North Dakota. J. A. Munro (April 24): First reports of hatching from Burleigh County on April 22.

South Dakota. R. A. Roberts (April 15): Reports of hatching received from Butte County on March 31.

H. C. Severin (April): Eggs were hatching in Butte County on April 3 and in Brule County on April 10.

Montana. H. B. Mills (April 24): Mormon crickets started hatching the first week in March in Lake and Sanders Counties and hatching is now general over the lower elevations in the State. It is estimated that from 50 to 75 percent of the eggs have hatched in the Yellowstone Valley.

Wyoming. R. A. Roberts (April 15): Reports of hatching in Fremont County on March 22.

Idaho. R. A. Roberts (April 15): Hatch reported at Mayfield, Elmore County, on March 13. Found on March 24 in first and second instars, principally the first, with rather heavy populations in small localized areas. Hatch in Washington County on March 27.

Utah. C. J. Sorenson (April 22): First hatching this season in the Silver City district of Juab County, north-central Utah, between March 24 and 30. Less than 5 percent of the eggs found hatched on the latter date.

Nevada. R. A. Roberts (April 15): In northern Nevada hatching reported at Winnemucca, Humboldt County, on March 14, and approximately an 80-percent hatch had occurred at the lower altitudes in Elko County by March 24.

Nevada. G. G. Schweis (April 24): Mormon crickets have hatched in the eastern and northern counties and there has been no great reduction in numbers. It will be necessary to carry on control measures over a large area in Elko, Humboldt, Eureka, Lander, and Pershing Counties during the coming season.

JAPANESE BEETLE (Popillia japonica Newm.)

General. C. H. Hadley and associates (April 25): Unusually late development of larvae early in the fall of 1938 largely overcome by the mild fall season, but a slightly higher than normal proportion of larvae entered hibernation as second-instar larvae. Owing to favorable weather conditions, winter larval mortality was negligible. Soil temperatures were above normal during

March but early spring larval activity was retarded by cool, wet weather in April and the overwintering soil population did not generally move up to the feeding position until the last week in April. Development of the overwintering population is slightly below normal. Recent larval surveys in different parts of the generally infested area indicate a somewhat higher than normal proportion of second-instar larvae at this time, with development further advanced in the southern part of its range. First field-collected adult recovered near a laboratory building at Moorestown, N. J., on April 24, undoubtedly an escape from one of the nearby greenhouses.

New York. D. M. Daniel (April 11): Diggings at White Plains, in the lower Hudson Valley, revealed larvae as follows: (1) 19 second-instar and 31 third-instar larvae from 4 diggings, 1 foot square; (2) 3 second- and 12 third-instar larvae from 1 digging; and (3) 1 first-, 6 second-, and 33 third-instar larvae from 3 diggings.

E. P. Felt (April 22): Grubs moderately abundant in turf at Scarborough, Westchester County.

#### ASIATIC GARDEN BEETLE (Autoserica castanea Arrow)

New York. D. M. Daniel (April 11): Eight larvae observed in diggings in turf at White Plains.

#### WIREWORMS (Elateridae)

Nebraska. M. H. Swenk (April 20): True wireworms (Melanotus sp.) were the subject of control inquiries from Dodge County on April 3 and Kearney County on April 10.

Idaho. F. H. Shirck (April 13): Pacific coast wireworm (Limonius canus Lec.) observed at Greenleaf, in southwestern Idaho, feeding on seed pieces of newly planted potatoes.

Washington. H. P. Lanchester (April 20): L. canus, L. californicus Mann., L. infuscatus Mots., and L. subauratus Lec. observed at Walla Walla today, with indications that the primary flights of L. canus and L. infuscatus are nearly over.

E. W. Jones (April 20): Larvae of L. canus and L. californicus found feeding on onion plants near soil surface at Walla Walla during the first week of April.

California. M. W. Stone (April 20): Damage by sugar-beet wireworm (L. californicus) to melon seed; especially severe in a 60-acre planting near Downey, Los Angeles County. Siftings made 7 days after planting on March 20 showed an average of over 10 and as many as 24 larvae per hill. Damage by this species to young sugar beets in Orange County necessitated some replanting.

#### CUTWORMS (Noctuidae)

Georgia. T. L. Bissell (April 21): Injurious in gardens at Experiment, central Georgia, particularly to lettuce.



Florida. C. S. Rude and L. C. Fife (April 8): Some damage to cotton in places in the Sea Island cotton-growing area.

Tennessee. L. B. Scott (April 14): Normally abundant in pastures in Montgomery County, north-central Tennessee.

South Dakota. H. C. Severin (April 24): Pale western cutworm (Arrotis orthogonia Morr.) reported as doing considerable damage to rye in Edmunds County, in the north-central part of the State.

Nebraska. M. H. Swenk (April 20): Request for control information as to cutworms received from Dodge County on April 3.

Texas. R. L. McGarr (April 22): Some damage noted in one field of cotton in Calhoun County this week.

R. K. Fletcher (April 21): Observed injuring corn on April 3 at Fort Worth, Tarrant County.

Idaho. F. H. Shirck (April 3): A young stand of red clover at Parma severely damaged by several species of cutworms. Plants eaten right down into the ground. Damage so severe that the crop on about 5 acres is totally destroyed.

Nevada. G. G. Schweis (April 24): An outbreak of cutworms, variety unknown, reported from Pershing County as doing great damage to young stands of alfalfa.

Washington. E. W. Jones (April 20): Observed damaging asparagus shoots in a few fields near Walla Walla from April 15 to 20.

#### EUROPEAN EARWIG (Forficula auricularia L.)

Utah. G. F. Knowlton (April 20): Adults are becoming active and masses of eggs are being observed at Farmington in northern Utah.

Washington. C. W. Getzendaner (April 20): Adults (mostly males) observed above ground nearly all winter, and increased in numbers in traps in March. Newly-hatched nymphs and eggs ready to hatch were observed near Buckley, Pierce County, by W. W. Baker and B. J. Landis.

#### COMMON RED SPIDER (Tetranychus telarius L.)

Georgia. T. L. Bissell (April 8): Abundant and injurious on a small clump of wild vetch at Griffin, central Georgia.

Mississippi. C. Lyle (April 21): Plants infested with red spider, Tetranychus sp., received from Hancock, Lafayette, and Pike Counties. Camellia, Cape-jasmine, and rose injured.

Louisiana. C. O. Eddy (March 30): On hollyhock at University, East Baton-Rouge Parish. (Det. by E. A. McGregor.)

CEREAL AND FORAGE - CROP INSECTS

WHEAT AND OTHER SMALL GRAINS

HESSIAN FLY (Phytophaga destructor Say)

Kansas. E. T. Jones (April 20): Dissection of puparia from Junction City on April 8 shows winter survival of 92 percent and 52 percent of overwintered larvae pupated. No emergence observed. On April 19, 18 percent of flies had emerged and 67 percent of total larvae pupated. Only 2 percent of plants infested with eggs in spot heavily infested with puparia. Emergence delayed and oviposition curtailed by cool weather.

CHINCH BUG (Blissus leucopterus Say)

Iowa. H. E. Jaques (April 24): Observed in threatening numbers in Henry, Guthrie, and Fremont Counties.

GREEN BUG (Toxoptera graminum Rond.)

Kansas. H. R. Bryson (April 24): According to E. G. Kelly and R. H. Painter the green bugs are present in the southern part of the State. Colonies numerous in oats reported in Greenwood County and vicinity. Wheat has grown rank in many localities; and there has been no outbreak. The low temperature during part of April has been unfavorable to parasites.

Oklahoma. F. A. Fenton (April 21): The outstanding pest in Oklahoma this month. Heavy infestations found in north-central counties, shading to medium and light to the east, west, and south. Most of infested fields are barley, although some infestation is found in wheat. Hard rains and activity of lady-beetles apparently have checked the spread of the infestation.

WHEAT WHITE GRUB (Phyllophaga lanceolata Say)

Oklahoma. F. A. Fenton (April 21): Reported from Bartlesville, Washington County, and Okeene, Blaine County. One field in Cotton County reported as plowed up, owing to activity of pest. Infestation generally is much less severe than a year ago.

PLAINS FALSE WIREWORM (Eleodes opaca Say)

Nebraska. M. H. Swenk (April 20): Found infesting wheatfields from Kimball and Furnas to Franklin Counties during the third week in March.

CORN

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

New York. L. A. Carruth (April 22): Surveys during the second week of April in standing cornstalks and stubble indicated an overwintering larval mortality of about 12 percent on western Long Island and a somewhat higher mortality in the region of Albany, in the Hudson Valley.

New Jersey. C. A. Clark (April 25): Pupation of overwintered larvae is from 2 to 3 weeks later than in 1938 in Burlington, Monmouth, and Middlesex Counties.

SOUTHERN CORN ROOTWORM (Diabrotica duodecimpunctata F.)

South Carolina. J. G. Watts (April 22): Injury on the increase in the Blackville area since April 1. Activities restricted to corn on low, heavy soil.

Georgia. T. L. Bissell (April 12): A few beetles observed on various flowers and plants at Tifton and Enigma. More abundant at Experiment. (April 21): Well-grown larvae found in soil near Austrian pea plants in sandy soil at Experiment. Beetles still common on alfalfa and various blossoms, and 1 found feeding on cabbage. (April 22): Four taken per 100 sweeps of net on alfalfa at Experiment.

Texas. R. K. Fletcher (April 21): Reported as causing severe injury to corn on March 31 at Wallis, Austin County.

ALFALFA AND CLOVER

A WEEVIL (Hypera brunneipennis Boh.)

Arizona. O. C. Bartlett (April 26): Heavy weevil population found by L. P. Wehrle on April 11, throughout approximately 15 square miles in the Yuma Valley. Feeding on clover and alfalfa. Larvae, pupae, and adults found in great numbers. (Det. by L. L. Buchanan.)

California. J. C. Hanlin (April 28): H. brunneipennis was found in four spots in the vicinity of Winterhaven, in Imperial County today.

ALFALFA WEEVIL (Hypera postica Gyll.)

Utah. G. F. Knowlton (April 8): Adults observed in several localities in northern Utah, and small larvae found infesting alfalfa in one field.

California. A. E. Michelbacher (April 21): Infestation in the San Joaquin Valley the heaviest since 1932. Injury in several fields borders on economic damage. Feeding noticeable before cutting, and in several fields populations are large enough that from 4,000 to 6,000 larvae were collected to 100 sweeps of an insect net. Although not serious, in most fields there was a general increase in the larval population throughout most of the infested area. Despite these facts, a survey of fields along the periphery of the infestation revealed no extensions. There was a marked increase in the larval population between March 30 and April 5. Rearing records showed about 40 percent of last-stage larvae as parasitized by Bathyplectes curculionis Thoms. on March 30. Larvae rather difficult to find in the region about Pleasanton on March 31, and in the region adjacent to San Francisco Bay, the number of larvae collected to 100 sweeps of the net for different fields ranged from 7 to 158. In the San Francisco Bay area 91 percent of last-instar larvae were parasitized. On April 5 the average number of larvae collected to 100 sweeps ranged from 22 to 378 in different fields, and 86 percent of last-instar larvae were parasitized.



CLOVER LEAF WEEVIL (Hypera punctata F.)

Kentucky. W.A. Price (April 22): Specimens received from several points in the State, with statements that they were damaging clover rather severely.

Utah. C. J. Sorenson (April 22): Reported as very abundant and preventing growth of alfalfa in the Smithfield district of northern Utah.

PEA APHID (Macrosiphum pisi Kltb.)

New York. N. Y. State Coll. Agr. News Letter (April 24): Stem mothers in all stages of development observed at Wantagh, Nassau County, on clover seedlings on April 20. No breeding had taken place.

Pennsylvania. H. E. Hodgkiss (April 19): Observed between the first and third instars in an alfalfa field examined on April 13 in Berks County, east-central Pennsylvania.

Virginia. S. B. Fenne (April 22): Numerous on field plantings of peas in Lancaster County. Usually apparent much later when plants are larger. Heavy losses anticipated as damage is early and severe.

H. G. Walker and L. D. Anderson (April 25): Observed heavily infesting alfalfa but very scarce in peafields at Norfolk.

Georgia. T. L. Bissell (April 12): English peas at Enigma free of pea aphid. (April 22): Forty-five taken per 100 sweeps of net on alfalfa at Experiment.

Kentucky. W. A. Price (April 22): Fairly common on alfalfa at Lexington on April 15.

Kansas. H. B. Hungerford (April 17): Very abundant on alfalfa in the vicinity of Lawrence this year; severe injury to peas expected unless conditions change.

H. R. Bryson (April 24): Pea aphid present in fields in southern part of the State and in alfalfa in the vicinity of Garden City.

Utah. G. F. Knowlton and F. C. Harmston (April 5): Found hatching in northern Utah. First-, second-, and a few third-instar nymphs found on alfalfa 3 to 4 inches tall. (April 8): Observed to have hatched on alfalfa in east-central Utah. (April 20): Seriously damaging and retarding growth of alfalfa in fields near St. George, in the southwestern part of the State, many fields showing almost no growth. First adult wingless aphid taken in northern Utah this season, collected on April 19 at Layton, Davis County. Most now found are in the second or third instar. Adults more abundant at Greenriver, east-central Utah. (April 22): Many wingless forms now mature and some producing young at Plain City, northern Utah. Approximately 20 percent of the adults and fourth-instar nymphs examined were infested with internal hymenopterous parasites.

Arizona. W. A. Stevenson (April 22): Infestation in alfalfa in Pima County, southern Arizona, on the increase.

Nevada. G. G. Schweis (April 24): Alfalfa aphid reported as damaging alfalfa fields in Washoe and Douglas Counties.

Washington. R. D. Eichmann (April 14): First damage in 10 years reported from Gardena, Walla Walla County. Two large alfalfa fields affected. Heavy populations in most fields in the vicinity. First cutting ruined. Winged forms migrating from this vicinity, and found in all alfalfa around Walla Walla. Many apparently immigrants. Erosion-control alfalfa near future pea fields yields winged immigrants. (April 21): Survey of 72 fields in 8 southeastern counties revealed only 1 concentrated hay-producing district of about 12 sections in Walla Walla County as suffering damage. Two other small isolated fields in Grant and Richland Counties showed damage.

Oregon. M. M. Reesher and L. P. Rockwood (April 15): Very few on alfalfa in the Willamette Valley in October 1938, and November 1938 was colder than normal. Scarce in early spring, indicating few eggs laid on this host in the fall of 1938. First mature stem mother observed on March 22. Despite favorable weather conditions since March 16, populations on alfalfa still low in most fields seen. Most fall populations seen on vetches and Austrian winter field peas in the Willamette Valley moderate at the beginning of the winter, continuing low through the winter. Rapid increase since March 15 on all early fall-sown annual legumes. Alates very scarce now and no signs of movement into late fall-sown vetches or peas yet observed. Coccinellids and syrphids more abundant than last year but dry weather has kept down fungous diseases of aphids.

A MITE (Tetranychina mcdonoughi McG.)

Louisiana. C. O. Eddy (March 30): Found on clover and other plants at University, East Baton Rouge Parish. (Det. by E. A. McGregor.)

THREE-CORNERED ALFALFA HOPPER (Stictoccephala festina Say)

Georgia. T. L. Bissell (April 22): Two taken per 100 sweeps of net on alfalfa at Experiment.

TARNISHED PLANT BUGS (Lygus spp.)

Georgia. T. L. Bissell (April 22): Thirty-one adults and nymphs of L. pratensis oblineatus Say taken per 100 sweeps of net on alfalfa at Experiment.

Arizona. L. L. Stitt (April 7): Newly emerged adults of L. elisus hesperus Knight and L. pratensis oblineatus found on alfalfa in nearly every field examined in Yuma County. Nymphs present are mostly in the fifth instar. Observations indicate the first generation for 1939 as nearly completed. Eggs well developed in a few adults. A number of blasted buds, typical damage, found in one field where the population was over one bug per sweep.

W. A. Stevenson (April 22): Sweeping records showed some increase in populations in Pima County, L. pratensis oblineatus predominating to date.



Utah. G. F. Knowlton and F. C. Harnston (April 5): L. elisus Van D. and L. elisus hesperus abundant on young alfalfa in northern Utah.

ALFALFA CATERPILLAR (Colias eurythene Bdv.)

Georgia. T. L. Bissell (April 22): One caterpillar taken per 100 sweeps of net on alfalfa at Experiment.

Utah. G. F. Knowlton (April 12): Abundant in two alfalfa fields examined in northern Utah.

HARVESTER ANTS (Pogonochyrnax spp.)

Oklahoma. F. A. Fenton (April 21): The red harvester ant (P. barbatus F. Smith) reported from Minco, southwest of the central part of the State.

Utah. G. F. Knowlton (April 14): Harvester ants are damaging alfalfa by clearing numerous spots of the vegetation at Garland, in northern Utah.

COWPEAS

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Georgia. T. L. Bissell (April 11-12): One found, which had apparently fed on pea leaves and was in soil by plant, in 2 days' scout on beans and volunteer cowpeas in the vicinities of Tifton and Enigma, south-central Georgia. None found in hibernation near last year's fields. (April 21): Adults observed today at Experiment on cowpeas, trap plants set in field; the first emerged from hibernation.

F R U I T I N S E C T S .

FLATHEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Nebraska. M. H. Swenk (April 20): Inquiries received from Douglas, Nuckolls, and Harlan Counties.

Oklahoma. F. A. Fenton (April 21): Reported on hackberry at Roosevelt; on pecan at Ada; and on elm at Chandler.

TARNISHED PLANT BUG (Lygus pratensis oblineatus Say)

New York. N. Y. State Coll. Agr. News Letter (April 10): A few observed on warm days at Poughkeepsie, but no injury. Noted on apple buds in Rockland County on April 3. (April 17): Observed in Dutchess County to the northern boundary of the county.

Washington. Ortho News (April 17): Troublesome this year in the Yakima Valley, after comparative scarcity for about 10 years.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

New York. N. Y. State Coll. Agr. News Letter (April 10): Apparently on the increase on peaches and prunes in Niagara County and on apple in Orleans County. More orchards infested this spring than noted in some time.

Georgia. O. I. Snapp (April 19): Four-year-old peach orchard killed near Fort Valley, central Georgia. Infestation still greater than that of an average year.

Washington. E. J. Newcomer (April 18): An unusual degree of parasitization by Aphelinus sp. noted at Yakima. Percentage of parasites not estimated, but over 100 reared from about 12 feet of heavily infested twigs of apple and pear.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

New York. N. Y. State Coll. Agr. News Letter (April 10): Apparently increasing in Orleans County this spring, as more orchards are infested than have been noted in some time.

Michigan. R. Hutson (April 22): Reported as prevalent on apple at Empire, in the northern part of the Southern Peninsula.

PACIFIC MITE (Tetranychus pacificus McG.)

Washington. Ortho News (April 17): Observed migrating up trees for about 10 days, numbers having apparently wintered successfully under the bark. Reported as being well up in tops of trees in the Yakima Valley on April 15.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

New York. N. Y. State Coll. Agr. News Letter (April 10): Examination of bands in the vicinity of Poughkeepsie indicates a low larval mortality. Of 219 larvae examined on March 21 only 12 percent reported as dead.

Delaware. L. A. Stearns (April 7): On March 28 there was 80-percent survival and no pupation of overwintered larvae.

Virginia. A. M. Woodside (April 22): About 25 percent of larvae have pupated at Staunton.

Georgia. J. E. Webb, Jr. (April 25): First moths emerged in insectary at Cornelia on April 19. On April 24 first field record of moths was of 14 caught in 10 traps in an apple orchard at Cornelia.

Alabama. J. M. Robinson (April 24): Larvae and pupae more abundant; some adults emerged on April 4.

Kentucky. W. A. Price (April 22): First pupae of the year found on April 3 at Henderson; on April 4 at Princeton; and on April 10 at Lexington. Despite cool weather, by April 18 pupation at Louisville amounted to about 15 percent.

Indiana. L. F. Steiner (April 6): Of more than 100 larvae taken from ground debris and under rough bark in the last few days at Vincennes none had pupated. (April 25): Examinations on April 18 indicated pupation under rough bark in the Vincennes area to average 6 percent; now 14 percent. Development 8 days later than in 1938 on this date, indicating that emergence will begin around May 3.

Missouri. L. Haseman (April 27): Pupation began in southern Missouri about April 15; no moth emergence reported up to April 19. In central Missouri no pupation observed up to April 26. Carryover of larvae greatly reduced over most of Missouri.

Oklahoma. F. A. Fenton (April 21): Reported from Stilwell, Adair County, in the northeastern part of the State.

Utah. C. J. Sorenson (April 22): High winter survival observed over the entire State.

Washington. E. J. Newcomer (April 18): Owing to temperatures above normal during the last month in the Yakima Valley, the season is a week earlier than in 1938, which was about normal. Pupae observed for about 2 weeks. First moths emerged near Yakima today, about a week earlier than in 1938.

#### EASTERN TENT CATERPILLAR (Malacosoma americana F.)

New York. N. Y. State Coll. Agr. News Letter (April 17): Egg masses rather plentiful in Dutchess County, particularly those of the forest tent caterpillar (M. disstria Hbn.). Scarce, however, on Long Island. No hatching to date. Plentiful in Niagara County.

D. E. Greenwood (April 26): Larvae just hatched out at Geneva.

New Jersey. C. H. Hadley (April 25): Eggs hatched at Moorestown about April 20. Webs occasionally noted on wild cherry. Development slow, owing to cool weather. Not very abundant.

Pennsylvania. H. E. Hodgkiss (April 19): Eggs hatching on March 4 in Mifflin County, and reported in different localities in eastern Pennsylvania at about the same time. Egg masses reported as abundant in the southwestern counties.

H. L. Blaisdell (April 20): Hatching of eggs observed in Wilkes-Barre on April 12.

Delaware. L. A. Stearns (April 5): First hatching observed at Rehoboth, southern Delaware, today.



Virginia. C. R. Willey (April 22): Very abundant in eastern Virginia. Nests observed in wild cherries and apple trees from Richmond to Williamsburg, and in Gloucester and Mathews Counties.

North Carolina. B. H. Wilford (March 27): Small larvae found within tents on wild cherry near Morganton, Burke County. No evidence of feeding. Leaves just beginning to develop.

A. M. Woodside (April 22): Observed on April 15 as abundant on apple and wild cherry near Statesville, Iredell County.

South Carolina. J. G. Watts (April 7): About one-third-grown larvae observed on wild cherry at Blackville.

Alabama. J. M. Robinson (April 24): Found to be abundant around Auburn on April 4.

Mississippi. C. Lyle (April 21): Specimens sent in on April 4 from Hattiesburg with statement that they were feeding on roses.

#### FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

New York. N. Y. State Coll. Agr. News Letter (April 24): Numerous egg masses noted in sweet cherries in Niagara County, and found to be a serious problem in a few orchards in Orleans County, western New York.

Illinois. W. P. Flint (April 25): Eggs about at peak of hatch on April 24 in the heavily infested area in western Illinois.

Missouri. L. Haseman (April 27): First evidence of egg hatching observed at Columbia on April 26.

#### EYE-SPOTTED BUDMOTH (Spilonota ocellana Schiff.)

Massachusetts. A. I. Bourne (April 25): A rather heavy infestation in several orchards in Middlesex County, eastern Massachusetts; the largest number of hibernating larvae observed or reported in eastern Massachusetts in recent years.

#### PISTOL CASEBEARER (Coleophora malivorella Riley)

Illinois. W. P. Flint (April 25): Present in serious numbers in several orchards in western Illinois. Apparently several local sources of infestation, covering an area of some 70 or 80 miles. Most heavily infested orchards at a considerable distance from each other.

#### A WEEVIL (Curculionidae)

Oklahoma. C. F. Stiles (April 24): An unidentified snout beetle, somewhat similar to the imbricated snout beetle, Epicaerus imbricatus Say, found feeding on foliage of young apple trees in Major County during the first part of April.

## APHIDS (Aphidae)

Massachusetts. A. I. Bourne (April 25): On the basis of overwintering eggs, various species very generally present throughout the State, and in unusually great abundance. Approximately 18,000 eggs per 50 twigs, averaging about 11 per linear inch. Only occasional hatching noted up to April 24. Rather rapid hatching induced by warm weather of the last 2 days, therefore young aphids can be found on buds still in the silver-tip stage.

New York. N. Y. State Coll. Agr. News Letter (April 10): Eggs numerous in orchards in Niagara, Orleans, and Wayne Counties, western New York. (April 17): Eggs abundant on apple trees in Nassau and Ulster Counties and not observed as hatched in Dutchess County, all in eastern New York. In Wayne County, eggs brought in about 3 weeks ago hatched this week. (April 24): In eastern New York all three species abundant on buds of trees receiving no dormant treatment in Nassau County, plentiful in orchards that had reached the green-tip stage in Orange County, and hatching rapidly on buds in Dutchess County, apparently about 60 to 80 percent in some orchards.

Iowa. H. E. Jaques (April 24): Considerable evidence of aphids on apple buds reported in Muscatine and Henry Counties.

### APPLE APHID (Aphis pomi Deg.)

New York. N. Y. State Coll. Agr. News Letter (April 24): Hatching rapidly now in Columbia County. First observed on April 23 in the vicinity of Ithaca.

D. E. Greenwood (April 26): Out since April 24 at Geneva. Greenings in green-tip stage.

Pennsylvania. H. E. Hodgkiss (April 19): Hatching on fruit trees some days before any green was showing in the buds.

Wisconsin. C. L. Fluke (April 21): Young apple trees pretty well infested.

### APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

New York. N. Y. State Coll. Agr. News Letter (April 10): In the vicinity of Poughkeepsie an occasional grain aphid was observed on apple trees on April 7 and 8, whereas the first one was found in Rockland County on April 3. (April 17): In Ulster and Dutchess Counties first aphid was observed on April 11, and in Nassau County many were found on green bud tips of untreated trees. (April 24): Hatching rapidly now in Columbia County and found in large numbers in Ulster County; however, in Monroe County, western New York, only a few were found. Hatching started on April 17 at Ithaca, and aphids are now present in moderate-to-large numbers.

Pennsylvania. H. E. Hodgkiss (April 19): Found hatching some days before buds showed green.

Ohio. T. H. Parks (April 24): Newly hatched aphids very abundant on green tips of apple buds during the last 2 weeks.



- Indiana. L. F. Steiner (April 13): Abundant in the Vincennes area.
- Michigan. R. Hutson (April 22): Eggs hatching in all parts of the fruit district.
- Illinois. W. P. Flint (April 25): Large numbers in apple orchards throughout the State, most of them now having left the trees.
- Wisconsin. C. L. Fluke (April 22): Unusually abundant this spring. Most eggs observed to be in good shape.

ROSY APPLE APHID (Anuraphis roseus Baker)

- New York. N. Y. State Coll. Agr. News Letter (April): First hatch in Rockland County on April 11; about 1 in 25 a rosy aphid in 1 early orchard in Orange County; none observed in Dutchess County. First observed at Ithaca on April 23, only 1 being found after examining 100 buds. Still a few unhatched eggs.
- Pennsylvania. H. E. Hodgkiss (April 19): Hatching somewhat variable, owing to delayed spring weather and subsequent development of fruit buds. Hatching started in Adams County on April 3 and was slow throughout the southern tier of counties through April 14. Both first- and second-instar nymphs seen in Delaware County, southeastern Pennsylvania, on April 5. Not found throughout the east-central counties until April 11 and then only occasionally. Up to April 15, eggs not hatched in the rest of the State. Bud development 2 weeks later than last year.
- Indiana. L. F. Steiner (April 13): None found in the Vincennes area, although extensive survey was made.
- Illinois. W. P. Flint (April 25): Only very small numbers found.
- Georgia. J. E. Webb, Jr. (April 22): Showing up in considerable numbers in apple orchards in the Cornelia section. Damage very slight.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

- Oregon. E. J. Newcomer (April 1): Observed to be parasitized by Aphelinus mali Hald. in a neglected apple orchard near Medford.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

- Massachusetts. A. I. Bourne (April 25): Rather scarce over the State; infestations spotted and limited to certain small areas of the orchards.
- New York. N. Y. State Coll. Agr. News Letter (April 10): Numerous in several peach orchards in Niagara County. (April 17): Eggs very abundant in Nassau County on apple trees, but apparently not so numerous in Dutchess County. (April 24): Eggs hatching in Nassau County.
- Pennsylvania. H. E. Hodgkiss (April 19): Eggs abundant in southeastern counties and found occasionally in other sections of the State.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Delaware. L. A. Stearns (April 7): Pupation was 66 percent and survival 90 percent on March 28.

Georgia. O. I. Snapp (April 1): Moths reared from infested twigs of Photinia serrulata, collected at Griffin on September 20, 1938. (Det. by C. Heinrich.) (April 19): Full-grown larvae of first generation found in green peaches at Fort Valley, central Georgia, on April 17, although no twig injury was observed. First mature larva of the season emerged from a green peach at Fort Valley on April 19. Less than the usual number of broods anticipated in central Georgia, as first twig injury is frequently observed before this date.

Alabama. J. M. Robinson (April 24): Observed as unusually numerous.

Mississippi. C. Lyle (April 21): Peach twigs injured last fall received on April 10 from Belmont, Tishomingo County.

PEACH BORER (Conopia exitiosa Say)

New York. N. Y. State Coll. Agr. News Letter (April 24): Present and apparently more numerous than ever in Niagara County.

North Carolina. D. L. Wray (April 19): English laurel damaged at Greensboro.

Mississippi. C. Lyle (April 21): Report of injury received from Oxford on March 27.

Nebraska. M. H. Swenk (April 20): Reported as attacking peach trees; and, in one instance, cherry trees in Nemaha, Johnson, Lancaster, Saline, and Nuckolls Counties from March 21 to April 20.

LESSER PEACH BORER (Conopia pictipes G. & R.)

New York. N. Y. State Coll. Agr. News Letter (April 24): Apparently more numerous than ever in Niagara County.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Virginia. A. M. Woodside (April 22): Activity of adults at Staunton restricted by cool weather. Those in captivity have fed very little with the exception of 2 days. Those in hibernation cages have not shown signs of activity.

South Carolina. J. G. Watts (April 7): Egg punctures observed on small plums about  $\frac{1}{4}$  inch in diameter at Blackville.

Georgia. J. E. Webb, Jr. (April 1): First beetles taken by jarring peach trees in the Cornelia district, as follows: 38 from 15 trees on March 28, as compared with 32 from 20 trees on March 21, 1938, and 4 from 24 trees on April 13, 1937.

O. I. Snapp (April 19): Adults began to appear on peach trees at Fort Valley on March 6, continuing until April 5. Infestation not heavier than that of an average year. First eggs in green peaches found on March 27, and larvae about 2 days old on April 5. First full-grown larvae of the season emerged from green peaches on April 19, a week later than last year but 2 weeks earlier than in 1937. It is therefore expected that Elberta, Georgia Belle, and possibly the last of the Hiley peaches in central Georgia will be attacked by a second brood.

Kentucky. W. A. Price (April 22): Adults began appearing at Mayfield on April 15, when Elberta peaches were in the split-shuck stage.

#### WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

New York. N. Y. State Coll. Agr. News Letter (April 24): Peach cottony scale rather abundant in a young peach orchard in Niagara County.

#### CHERRY

##### BLACK CHERRY APHID (Myzus cerasi F.)

New York. N. Y. State Coll. Agr. News Letter (April 24): Observed in Rockland County on April 10, and a few noted in Dutchess County. (April 24): First seen on sweet cherries on April 20 at Ithaca.

##### CHERRY SCALE (Aspidiotus forbesi Johns.)

Ohio. T. H. Parks (April 24): Forbes scale reported as heavily infesting a sour cherry orchard near Zanesville, Muskingum County. Dormant treatment applied to trees late in March.

#### PEAR

##### PEAR PSYLLA (Psylla pyricola Foerst.)

New York. N. Y. State Coll. Agr. News Letter (April 10): Flies first noticed in Orleans County on March 26 and in Wayne County on March 23. (April 17): Flies began to emerge in Ulster County during the week of March 20. Little activity since but occasional eggs found. Flies observed in Dutchess County but no egg laying. No eggs found in Wayne County. (April 24): Adults, but very few eggs, observed in Nassau, Orange, and Dutchess Counties. Eggs found in small numbers in Ulster County; scarce in Orleans and Monroe Counties; found in small numbers at Ithaca on April 20.

Pennsylvania. H. E. Hodgkiss (April 19): Hibernating adults found on trees in Lebanon County on April 5. Some eggs laid, although bud development is considerably retarded. Eggs apparently have not been deposited very long.

##### PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York. N. Y. State Coll. Agr. News Letter (April 17): First observed on pears in Ulster County on April 14. (April 24): Active but not numerous in Orange, Ulster, and Dutchess Counties. First found in Columbia County on April 21. A few observed on apples at Ithaca on April 23.



Oregon. S. C. Jones (March): Emergence began on approximately March 16, when prune buds still dormant. Peak of emergence reached when most prune buds showed green tips. Emerged in small numbers on March 30 in the Willamette and Umpqua Valleys. Infestation severe in individual orchards. Also reported from Unatilla County in northeastern Oregon.

California. S. F. Bailey (April 21): Infestation on pear and prunes widespread in north-central California in Sonoma, Solano, Napa, Lake, Eldorado, and Santa Clara Counties but not as acute as in 1930-33. Damage moderate to severe.

#### RASPBERRY

##### RASPBERRY FRUITWORM (Byturus unicolor Say) .

Washington. B. J. Landis and W. W. Baker (April 20): Adults appeared in foliage of new canes of blackberry and in flowers of dandelion and trillium on April 17.

##### RED-NECKED CANE BORER (Agilus ruficollis F.)

Oklahoma. F. A. Fenton (April 21): Reported from Shawnee.

##### RASPBERRY ROOT BORER (Benbecia marginata Harr.)

Washington. W. W. Baker and B. J. Landis (April 20): Bramble crown borer began to break hibernation about the middle of March; larvae practically all out of hibernacula on April 17.

##### SALMONFLY (Taeniopteryx pacifica Banks)

Washington. B. J. Landis (April 20): Adults numerous on canes of red raspberries in a field at Roy on April 2. Canes had little foliage at the time. Damage to foliage severe in this field in 1938.

#### GOOSEBERRY

##### A GOOSEBERRY BORER (Xylocrius agassizi Lec.)

Washington. W. W. Baker (April 20): Adults emerged rapidly between April 16 and 17 during warm weather. Egg laying had begun by April 17.

#### GRAPE

##### GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

California. G. H. Kaloostian (April): First adult taken in a bait trap on April in a vineyard near Woodlake, Tulare County. Collections from 21 traps in 7 vineyards in Tulare and Fresno Counties on April 10 included 22 females and 37 males. Ten females carried eggs.

GRAPE ROOT BORER (Paranthrene polistiformis Harr.)

Virginia. S. D. Roope (April 18): Worms found in roots of grapevines at Lynchburg on April 15. (Det. by C. Heinrich.)

GRAPE ROOTWORM (Fidia viticida Walsh)

Virginia. S. D. Roope (April 18): Worms found on roots of grapevines at Lynchburg on April 15. (Det. by W. H. Anderson.)

A WEEVIL (Glyptoscelis squamulata Crotch)

California. D. F. Barnes (April 10): Found on grape foliage on April 7 at Del Rey, Fresno County. From 20 vines 209 beetles collected, an average of 10 per vine, an infestation large enough to damage the small blossom buds rather extensively when the foliage area is small, as at present.

A FLEA BEETLE (Altica torquata Lec.)

Arizona. C. D. Lebert (April 10): Observed riddling new foliage in a vineyard near Mesa. Heavy damage in spots, necessitating control measures.

GRAPE LEAFHOPPER (Erythroneura cones Say)

Utah. G. F. Knowlton (March 28): Extremely abundant under fallen grapeleaf masses in one vineyard at Marriott, Weber County. Damage here severe in 1938, causing loss of crop of some varieties.

PECAN

APHIDS (Aphidae)

Georgia. T. L. Bissell (April 19): Stem mothers of Monellia costalis Fitch observed on pecan in Spalding County, central Georgia. Adult stem mothers of Melanocallis caryaefoliae Davis seen on pecan trees in Spalding County, some with young.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Alabama. J. M. Robinson (April 24): Reported on March 29 from Clio, in southeastern Alabama, as being on a large number of pecan trees.

CITRUS

GREEN CITRUS APHID (Aphis spiraeicola Patch)

Florida. H. Spencer (April 11): Found in numbers in the upper east coast citrus section of Florida. Curling young-growth terminals and causing some damage to bloom.

H. T. Fernald (April 25): Very important near Orlando earlier in the season; recently observed again as doing considerable damage to orange.



CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Florida. J. R. Watson (April 22): Weather over most of Citrus Belt very dry during the last month, resulting in a heavy infestation on citrus. Control measures used generally.

FIG

FIG SCALE (Lepidosaphes ficus Sign.)

California. C. K. Fisher (April 5): Eggs began hatching today in the Fresno district. A few young crawlers were still under the old scales; none found on wood or leaves. In 1937 hatching started about April 23, and in 1938 on April 18.

ALMOND

A DARKLING BEETLE (Metoponium abnorme Lec.)

California. E. O. Essig (April 12): Observed eating buds and foliage of almond trees at Antioch. Unusual for this beetle to feed in trees.

AVOCADO

PYRIFORM SCALE (Protopulvinaria pyriformis Ckll.)

Florida. J. R. Watson (April 22): Rather common on avocados in southern Florida.

T R U C K \_ C R O P I N S E C T S

VEGETABLE WEEVIL (Listroderes obliquus Klug)

Mississippi. C. Lyle (April 21): Apparently new adults sent in on April 19 from Forrest County.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata F.)

Virginia. L. W. Brannon (April 24): First beetle of the season observed feeding on young snap beans on April 12 near Norfolk. Beans just up.

South Carolina. J. G. Watts (April 22): Adults observed at Blackville on various wild plants since April 7. Also on cucumbers, potatoes, and beans. Damage to seedling cucumbers not severe.

STRIPED CUCUMBER BEETLE (Diabrotica vittata F.)

Virginia. H. G. Walker and L. D. Anderson (April 25): Observed feeding on young cantaloup plants in a coldframe at Norfolk.

CARROT BEETLE (Ligyrus gibbosus Deg.)

South Dakota. H. C. Severin (April 24): Beetles emerging now but have not begun to lay eggs.

FLEA BEETLES (Halticinae)

Idaho. F. H. Shirck (April 25): Several reports of damage in radish fields at Parma.

Utah. G. F. Knowlton (April 13): Severely damaging young radishes at Logan, often eating small leaves down to the crown.

THRIPS (Thysanoptera)

Florida. J. R. Watson (April 22): Heavy infestation of Thrips tabaci Lind. on celery in the Everglades section around Belle Glade.

Arizona. M. F. Wharton (April 3): Moderate to severe damage in spots on large lettuce plantings in the Salt River Valley by wheat or flower thrips (Frankliniella mcultoni Hood). Control measures used. (Det. by S. F. Bailey.)

Texas. R. K. Fletcher (April 21): T. tabaci reported on flax and potato on March 15 at Weslaco, Cameron County. (Det. by F. Andre.)

CHANGA (Scepteriscus vicinus Scudd.)

Florida. J. R. Watson (April 22): Mole crickets, mostly the changa, flying during the month.

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla Perty)

Georgia. T. L. Bissell (April 10): Two adults found on April 6 and 10 at Experiment, moving on surface of ground. No damage noted.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

South Carolina. J. G. Watts (April): Adults on the increase at Blackville since the first of the month. First eggs observed on April 12.

Georgia. T. L. Bissell (April 12): Adults and eggs common on tomato at Enigma.

Alabama. J. M. Robinson (April 24): Showing up in unusually large numbers.

Mississippi. E. W. Dunnam (April 3): First beetle of the season noted at Leland on April 1, feeding on young potatoes.

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. H. J. Ryan (April 14): Reported on tomato at Los Angeles on March 1. (Det. by V. E. Williams.)

J. C. Elmore (April 20): Young tomato plants infested in the San Pedro hills, southern California. From one to three leaf folders per plant in three fields totaling about 25 acres.

#### BEANS

##### MEXICAN BEAN BEETLE (*Epilachna varivestis* Muls.)

Virginia. L. W. Brannon (April 24): First adult of the season in the Tidewater Virginia area found feeding on young snap beans in the field in the vicinity of Portsmouth on April 18. Beans just up. Only 2 beetles found on 12 rows of snap beans 200 feet long, so apparently the insect was just beginning to emerge. Damage very slight. Examinations on April 12 and 14 gave negative results. First beetle found a week later than in 1938.

Georgia. T. L. Bissell (April 12): One beetle and mass of eggs found on large field of bunch beans at Enigma, south-central Georgia. Beetle had fed on several leaves. Beans in blossom.

Alabama. J. M. Robinson (April 24): Numbers much smaller than ordinarily seen at this time, owing possibly to cool weather.

Ohio. H. C. Mason (April): First activity in hibernation cage at Columbus observed on February 28, when 12 beetles out of the 14,600 placed in hibernation were crawling about. Temperature 66° F. Only slight activity at intervals since, although temperature reached 74°, or more, for a period of 4 days in March.

##### BEAN LEAF BEETLE (*Ceratomyza trifurcata* Forst.)

Virginia. L. W. Brannon (April 24): First adult of the season found feeding in the field on young snap beans today at Norfolk. Only one found on four rows of beans 280 feet long. Previous field examinations gave negative results. First beetle found 9 days later than in 1938.

Georgia. T. L. Bissell (April 11-12): No beetles nor evidence of feeding seen in the vicinity of Tifton and Enigma, south-central Georgia. Beans in blossom. One found on cowpea plant at Experiment on April 5. (April 24): Beetles making holes in leaves of young beans at Experiment.

Alabama. J. M. Robinson (April 24): Much less numerous at present than average at this season.

##### BANDED CUCUMBER BEETLE (*Diabrotica balteata* Lec.)

South Carolina. J. G. Watts (April 22): Adults observed at Blackville on potatoes, beans, and lettuce since April 7. No damage observed.

Georgia. T. L. Bissell (April 12): One beetle found on beans at Enigma.



PEAS

PEA WEEVIL (Bruchus pisorum L.)

North Carolina. J. S. Pinckney (April 24): First weevils emerging from hibernation quarters swept in a field of Austrian winter peas at Statesville, Iredell County, today.

Oregon. J. C. Chamberlin (April): First general movement from hibernation quarters to pea fields occurred from April 17 to 20 in the Willamette Valley, the earliest general dispersal on record, and nearly a month earlier than in 1938. No peas in bloom except for a few garden plots but all fields now lightly infested.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

Florida. H. T. Fernald (April 25): Cabbage butterfly rather more abundant than usual on Cruciferaceae near Orlando.

Kentucky. W. A. Price (April 22): First adults seen on April 8.

Missouri. L. Haseman (April 27): Numerous flights observed at Columbia since the middle of April.

Idaho. J. R. Douglass (April 8): Two specimens collected on laboratory grounds at Twin Falls on April 8, the first noted this season.

Utah. G. F. Knowlton (April 8): Observed in flight at Magna. (April 20): Cabbage butterflies abundant in one field at Logan.

Washington. L. G. Smith (April 17): Adults seen for the first time this season at Pullman.

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Utah. G. F. Knowlton (April 20): Moths recently observed as active in several localities in northern and central Utah.

APHIDS (Aphidae)

Virginia. H. G. Walker and L. D. Anderson (April 25): Cabbage aphid rather abundant on seed kale and lightly infesting cabbage plants in some fields at Norfolk.

Georgia. T. L. Bissell (April 24): Cabbage aphids thick on 1 acre of cabbage at Experiment.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Georgia. T. L. Bissell (April 22): One taken per 100 sweeps of net on alfalfa at Experiment.

Alabama. J. M. Robinson (April 24): Present in unusually large numbers.

Texas. R. K. Fletcher (April 21): Reported as causing severe injury to turnip on March 24 at Kerrville, Kerr County; to cabbage and mustard on March 22 at Columbus, Colorado County; and to collards on April 3 at Burton, Washington County.

Iowa. C. J. Drake (April 25): Large shipment of cabbage plants from the South received in Des Moines a few days ago, heavily infested with adults and eggs. Some shipped to Clarinda, Page County, and plants sent from there contained adults and eggs; many plants so badly damaged that it was necessary to discard them.

### SQUASH

#### SQUASH BUG (Anasa tristis Deg.)

South Carolina. J. G. Watts (April 7): Several adults seen in flight at Blackville.

Utah. G. F. Knowlton and F. C. Harmston (April 5): Adults active.

### ASPARAGUS

#### ASPARAGUS BEETLE (Crioceris asparagi L.)

South Carolina. J. G. Watts (April): Increasing since the first of the month at Blackville. Eggs plentiful on April 11 and few larvae found on voluntary plants. On April 20 larvae more abundant on voluntary plants and some almost ready to pupate. Present indications are that it may be quite abundant this season.

Utah. G. F. Knowlton (March 28): Adults still in protected places on cool days, but present in and around asparagus patches examined at Marriott, Weber County. (April 20): Beetles now active in northern Davis County and southern Weber County. Eggs laid during the last 3 days. Moderate injury to approximately 10 percent of stocks examined in one locality.

Washington. R. S. Lehman (April 18): Reported as doing damage to asparagus at Walla Walla.

C. W. Getzendaner (April): Adults observed in the vicinity of Puyallup on April 14 and present in fair numbers in a field of asparagus at Sumner on April 17, where some tips showed injury. First eggs observed at Puyallup on April 20.

### ONIONS

#### ONION THRIPS (Thrips tabaci Lind.)

Virginia. H. G. Walker and L. D. Anderson (April 25): Onions at Norfolk becoming infested.



APHIDS (Aphidae)

Virginia. H. G. Walker and L. D. Anderson (April 25): An aphid has been seriously injuring shallots at Norfolk.

SWEET CORN

CORN EAR WORM (Heliothis armigera Hbn.)

Florida. G. W. Barber (February-March): Normally abundant throughout February and March in the southern part of Dade County. In every planting of corn observed 100 percent of the ears were attacked, averaging about five larvae per ear. Not so much injury to lima bean pods found as in previous years.

FALL ARMYWORM (Laphygna frugiperda A. & S.)

Florida. G. W. Barber (February-March): Found on corn in the southern part of Dade County in about average abundance throughout February and March. Much less numerous than in 1937, somewhat more plentiful than in 1938, and as abundant as in 1936. No plants other than corn attacked. As in previous years, at first they were more abundant in the southern tip of the county, where about 80 percent of corn plants were attacked. Infestation gradually diminished northward to about 20 percent. As the season advanced and the second generation was produced, all cornfields were attacked 100 percent.

STRAWBERRY

STRAWBERRY PAMERA (Orthaea sp.)

Florida. J. R. Watson (April 22): Heavy infestation, mostly O. bilobata Say, in some fields in Alachua County.

A LYGAEID (Paronius longulus Dall.)

Texas. R. K. Fletcher (April 21): Injuring strawberries on March 21 at Cuero, De Witt County.

APHIDS (Aphidae)

California. R. E. Campbell (April 1): Infestations on strawberries in Los Angeles County by an unknown aphid have injured blossoms and caused berries to be deformed.

BLACK VINE WEEVIL (Brachyrhinus sulcatus F.)

Utah. G. F. Knowlton (April 1): Found on strawberry at Logan, Cache County, although no outbreak has occurred.

COMMON RED SPIDER (Tetranychus telarius L.)

Virginia. H. G. Walker and L. D. Anderson (April 25): Still rather abundant and causing considerable damage in strawberry fields at Norfolk.

PEPPER

PEPPER WEEVIL (Anthonomus eugenii Cano)

California. J. C. Elnore (April 20): Winter survived on last year's pepper plants and now infesting blossom buds on new growth in a field in the San Pedro hills.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Utah. G. F. Knowlton (April 20): Moderately abundant on Cheirinia repanda in Tooele County.

APHIDS (Aphididae)

Utah. G. F. Knowlton and F. C. Harnston (April 20): Aphids seriously damaging some sugar beet plants grown for seed in Washington County.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Virginia. S. B. Fenne (April 22): Found generally on April 3 and April 8 at Southside, causing moderate damage.

Florida. F. S. Chamberlin (April 5): Very few found on newly set tobacco in Gadsden County.

Tennessee. L. B. Scott (April 14): Moderately abundant in plant beds in north-central Tennessee. Infestation more severe than in 1938.

GARDEN FLEAHOPPER (Halticus citri Ashm.)

Florida. F. S. Chamberlin (April 22): Apparently less abundant than normal on newly set tobacco plants in Gadsden County. (Det. by H. G. Barber.)

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. F. Bondy and C. F. Rainwater (April 22): Some active in cages in Florence County but numbers not increasing, because of cool weather. No cotton far enough advanced to afford food for weevils.

Georgia. P. M. Gilmer and P. A. Glick (April 15): Weevils in cages in Tift, Berrien, Cook, Lowndes, and Echols Counties, southern Georgia, show considerable activity. As high as 1 percent of installation of November 15, 1938, found active on a single day. Movement out of hibernation undoubtedly delayed by cool weather. None taken in the field. So far as spring

emergence is concerned, indications are that infestation will be as heavy as that of last season.

Florida. C. S. Rude and L. C. Fife (April 15): Reported as having been found on cotton in Marion County. Control measures being used by some growers.

Mississippi. E. W. Dunnam and J. C. Clark (April 15): Reported as found this week in Washington County during the clearing of new ground.

Louisiana. R. C. Gaines and assistants (April 22): Total weevils taken on field flight screens in Madison Parish for the period from March 25 through April 21 were 16, as compared with 5 for the same period in 1938 and 5 in 1937.

Texas. R. W. Moreland (April 1): Weevils active in cages in Brazos and Burleson Counties, except on March 30. On March 31, 159 weevils were found out of hibernation, the largest number counted during this period. Found in stalk cases, 117; in moss cages in the open, 20; and in woods, 11 found in cages containing leaves and 11 in cages containing moss.

R. L. McGarr (April 15): Three observed on a few plants of stubble cotton examined in a field in Calhoun County on April 12, first record for this season. (April 22): First weevil observed on cotton planted this season in Calhoun County on April 19.

#### A WEEVIL (Chalcodermus collaris Horn)

Florida. C. S. Rude and L. C. Fife (April 22): Taken feeding on the growing tips of cotton in the Sea Island section of Florida. Apparently not doing any serious damage but easily found.

#### PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. A. J. Chapman (April 8): Seven moths emerged from the hibernation experiment at Presidio during the week. (April 22): A total of 670 moths emerged during the week from the hibernation experiment at Presidio, as compared to 109 last week. A total of 529 moths have emerged thus far from larvae overwintering in cotton bolls; 249 moths from larvae overwintering in cocoons; and 26 from larvae overwintering in thurberia bolls. Some emergence from all treatments. Emergence from larvae overwintering in cocoons heavy, as compared with records of previous years.

#### BOLLWORM (Heliothis armigera Hbn.)

Texas. R. W. Moreland (April 8): One egg found on April 5 in examining 500 alfalfa plants, the first found this season in Brazos and Burleson Counties.

#### COTTON FLEA HOPPER (Psallus seriatus Reut.)

Texas. R. K. Fletcher (April 21): Adult taken on April 3 at College Station on primrose.



R. L. McGarr (April 8): First flea hoppers on cotton for this season in Calhoun County noted on April 3, an inspection of 300 plants on this date showing 3 adults and 3 nymphs. Two hundred cotton plants inspected in two other fields on April 8, only 1 nymph being found. (April 15): Two hundred plants in each of 4 fields of cotton in Calhoun County inspected this week, and 2 nymphs recorded in each of 2 of the 4 fields. Emergence of nymphs from the 10 Croton hibernation experiments very light this week, only 2 nymphs recorded, owing no doubt to dry weather prevailing until April 13. (April 22): A total of 1,700 cotton plants inspected in 8 fields in Calhoun County this week averaged 2.5 adults and 0.3 nymphs per 100 plants, an increase of 2.3 per 100 plants over the previous week. Highest number observed on 100 plants this week was 13 adults and 1 nymph. Total emergence from 10 Croton cages this week was 12,171 nymphs, as compared with 2 last week. Highest emergence for any day was 6,374 nymphs on April 21, the high emergence being due mostly to rain on April 13.

#### APHIDS (Aphididae)

South Carolina. F. F. Bondy and C. F. Rainwater (April 15): Root aphids found on cotton in Florence County for the first time this week. Common on most weeds. No leaf aphids found. (April 22): Root aphids numerous in cotton in Florence County, Rhopalosiphum sp. being found in larger numbers than the others. No leaf aphids.

Texas. R. L. McGarr (April 22): An increase in infestation in most fields observed this week in Calhoun County. High enough in a few fields to cause noticeable damage.

R. K. Fletcher (April 21): Aphis gossypii Glov. found in small numbers on cotton in the two-leaved stage in the Brazos River bottom, Burleson County, on April 19. Not doing damage at present.

#### MOLE CRICKETS (Gryllidae)

Georgia. P. M. Gilmer and P. A. Glick (April 15): Some damage to cotton in sandy fields in Tift, Berrien, Cook, Lowndes, and Echols Counties, especially from mole cricket activity. Fields sporadically scattered and damage mostly confined to fields of light soils. Damage considerable in small areas within certain fields.

#### FOREST AND SHADE-TREE INSECTS

##### CANKERWORMS (Geometridae)

Vermont. H. L. Bailey (April 28): A few spring canker worm moths had emerged last week.

Pennsylvania. H. E. Hodgkiss (April 19): Eggs of fall and spring cankerworm found on apple. This and other species rather abundant on shade trees throughout the State.

Illinois. W. P. Flint (April 25): Now hatching throughout central and southern Illinois. Very large numbers found on susceptible trees. Damage evidently will be more severe than in 1938.

Missouri. L. Haseman (April 27): Emergence and oviposition began early in April, and hatching of eggs kept in the laboratory for a week began about April 23. No evidence of outdoor hatching or early feeding up to April 26.

Iowa. H. E. Jaques (April 24): Spring cankerworm adults reported as appearing in abundance in Henry, Keokuk, western part of Pottawattamie, and Linn Counties.

#### TENT CATERFILLARS (Malacosoma spp.)

Vermont. H. L. Bailey (April 28): Eggs of forest tent caterpillar (M. disstria Hbn.) observed on some trees at Barre on April 27. No sign of hatching.

Utah. G. F. Knowlton and F. C. Harnston (April 20): Tent caterpillars seriously stripping young leaves from willows, poplars, and other trees and shrubs in several localities in Washington and Kane Counties in southwestern Utah.

Washington. W. W. Baker (April 20): Eggs of M. pluvialis Dyar beginning to hatch on April 7 on fruit trees just north of Vashon, Vashon Island. Eggs quite abundant.

California. S. F. Bailey (April 21): Forest tent caterpillar, M. disstria, together with the apple tree tent caterpillar, M. americana F., is apparently more widespread than in 1938, and together they are causing complete defoliation in Sonoma, Napa, Solano, Yolo, and Colusa Counties, in the Sacramento Valley.

#### GYPSY MOTH (Porthetria dispar L.)

Vermont. H. L. Blaisdell (March 13-18): During the week at Starksboro, Addison County, a single-egg-cluster infestation was found. This is the first to have been found in this town.

Massachusetts. H. L. Blaisdell (March 13-18): Infestation found just off the Mohawk Trail, near the Eastern Summit, in the town of Florida. Although 5 egg clusters found at this colony were creosoted, there still remains further work of extermination to be done. The town is in the barrier zone.

A. F. Burgess (March 20 to 25): Small amount of work done at the infestation found in Florida and three new egg clusters discovered.

Connecticut. A. F. Burgess (March 6-11): Two egg clusters recently discovered at Bethlehem, in the barrier zone. This is the first infestation ever to have been discovered in this town.

#### A SCARABAEID (Anomala binotata Gyll.)

Virginia. S. B. Fenne (April 22): Large numbers of leaf chafers found on various trees in Amelia County, apparently not causing damage.

ELM SCURFY SCALE (Chionaspis americana Johns.)

Tennessee. G. M. Bentley (April 19): Collected on twig at Memphis. (Det. by H. Morrison.)

Nebraska. M. H. Swenk (April 20): Specimen of infested twig received from Antelope County on March 21.

ASH

BANDED ASH BORER (Neoclytus capreae Say)

Nebraska. M. H. Swenk (April 20): Specimens sent in from Cuming County on April 17.

A CLIMBING CUTWORM (Leuconemis sp.)

Arizona. C. D. Lebert (April 10): At Phoenix these climbing cutworms appear about April 1 every year; hide out in the daytime under the rough bark; and during the night riddle new foliage of ash trees. First observed in 1931 or 1932.

ELDERBERRY

AN APHID (Aphis sambucifoliae Fitch)

Mississippi. C. Lyle (April 21): Specimens feeding on elderberry received from Yazoo City.

OAK

AN OAK LEAF MINER (Buprestidae)

South Carolina. J. G. Watts (April 7): Adult stage observed on post oak at Blackville.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Michigan. E. I. McDaniel (April 19): Several specimens taken from mugho pine in Detroit. Insect quite troublesome on ornamental evergreens in the vicinity of Detroit last year.

A SAWFLY (Neodiprion sertifer Geoff.)

New Jersey. F. A. Soraci (May 1): Eggs had begun hatching at Gladstone on April 29. Eggs plentiful on a small planting of Pinus ponderosa, the first record of occurrence on this pine. Also found on P. resinosa and P. sylvestris. A few eggs found on Austrian pine (P. nigra). Control measures to be used within a few days on the whole forest planting of about 22 acres.



A SAWFLY (Acantholyda erythrocephala L.)

New Jersey. F. A. Soraci (May 1): Adult found on Pinus resinosa at Gladstone on April 29.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Connecticut and New York: E. P. Felt (April 22): Somewhat common in southwestern Connecticut and southeastern New York on Austrian and mugho pines.

Nebraska. M. H. Swenk (April 20): Report from Lincoln County on March 21 of infestation of two 15-year-old spruce trees.

APHIDS (Aphididae)

Connecticut and New York. E. P. Felt (April 22): Eggs of the brown pine aphid (Lachnus sp.) somewhat abundant on needles of Austrian and white pines in southwestern Connecticut and southeastern New York.

Nebraska. M. H. Swenk (April 20): Aphids reported as infesting needles of Scotch pine in Morrill County on March 21.

A NEEDLE MINER (Marmara sp.)

North Carolina. B. H. Wilford (March 31): Some old mines and a few fresh ones observed at Asheville, in small white pines under hardwood cover. Both prepupal larvae and pupae found.

SPRUCE

SPRUCE NEEDLE MINER (Taniva albolineana Kearf.)

Michigan. E. I. McDaniel (April 19): Reported from Ypsilanti, where spruce trees 15 feet high and over are badly infested.

SPRUCE MITE (Paratetranychus uniunguis Jacobi)

Michigan. R. Hutson (April 22): Mites observed on spruce at South Haven, Grand Rapids, Kalamazoo, and Detroit.

I N S E C T S   A F F E C T I N G   G R E E N H O U S E

A N D   O R N A M E N T A L   P L A N T S

GREEN JUNE BEETLE (Cotinis nitida L.)

Tennessee. L. B. Scott (April 14): Normally abundant in Montgomery County, north-central Tennessee. Damage to lawns is from moderate to severe.

ONION THRIPS (Thrips tabaci Lind.)

New York. F. S. Blanton (January 14): Severe loss caused to gerbera in greenhouses at Babylon, Long Island. Flowers ruined by feeding. (Det. by F. Andre.)

FLOWER THRIPS (Frankliniella tritici Fitch)

South Carolina. J. G. Watts (April): Attacking various wild and cultivated flowers at Blackville.

A PLANT BUG (Euryophthalmus convivus Stal)

California. C. K. Fisher (April 13): Bordered plant bugs have been observed on warm days all winter and are now very numerous in one section of the city of Fresno. They are attacking the new growth on summer lilac (Buddleia sp.) and loganberry vines.

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum Westw.)

Tennessee. G. M. Bentley (April 19): Whitefly reported in greenhouses where control measures not used.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

South Carolina. J. G. Watts (March and April): An infestation of this scale has been causing considerable damage to garden shrubbery for the last 2 years at Blackville.

CYCLAMEN MITE (Tarsonemus pallidus Banks)

Pennsylvania. E. P. Felt (April 22): Reported as quite injurious to Godetia sp. in a greenhouse in the Philadelphia area.

ARBORVITAE

ARBORVITAE LEAF MINER (Argyresthia thuiella Pack.)

New York. E. P. Felt (April 22): Reported as abundant near Watermill, Long Island.

AZALEA

AZALEA SCALE (Eriococcus azaleae Comst.)

Florida. J. R. Watson (April 22): Sent in from Alachua and other counties in northern Florida.

BOXWOOD

BOXWOOD LEAF MINER (Monarthropalpus buxi Laboulb.)

Massachusetts. E. P. Felt (April 22): Moderately abundant in boxwood at Hatchville. The boxwood had been submerged by the storm tide of last September and the mined areas were suggestive of fungus infection.

Virginia. C. R. Willey (April 22): Practically 100-percent pupated at Richmond on April 20.

CHRYSANTHEMUM

CHRYSANTHEMUM APHID (Macrosiphoniella sanborni Gill.)

Mississippi. E. W. Dunnam (April 15): Causing slight damage to chrysanthemum buds in Leland.

Oklahoma. F. A. Fenton (April 21): Reported from Stillwater and Fairfax.

CHRYSANTHEMUM LACEBUG (Corythucha marmorata Uhl.)

Mississippi. E. W. Dunnam (April 15): Doing serious damage to chrysanthemums in Leland.

THRIPS (Thysanoptera)

Tennessee. G. M. Bentley (April 19): Thrips reported on chrysanthemum and causing some damage where control measures have not been used.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Const.)

Pennsylvania. E. P. Felt (April 22): Moderately abundant on euonymus in the Philadelphia area.

Mississippi. C. Lyle (April 21): Specimens received from Brookhaven.

GARDENIA

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Virginia. H. G. Walker and L. D. Anderson (April 25): Many requests received from Norfolk for information on the control on gardenias.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips simplex Morison)

Florida. J. R. Watson (April 22): Numerous complaints received of this thrips on gladiolus.

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curt.)

Virginia. C. R. Willey (April 22): Very abundant in Richmond and vicinity. Emergence of adults began between April 15 and 18. None found to have emerged on heavily infested tree on April 15; empty pupal cases found on April 18; and first flies seen on April 19.



JUNIPER

JUNIPER WEBWORM (Dichomerus marginella F.)

New Jersey. H. C. Donohoe (April 13): A planting of junipers at White Horse shows severe defoliation from 1938 attack. In a cursory examination of the debris in the crown of 1 3-foot plant, 44 hibernating webworms were noted.

Maryland. E. N. Cory (April 11): Attacking Irish juniper at Baltimore.

Virginia. C. R. Willey (April 22): Very abundant on Irish and Swedish junipers in Richmond. First pupa found on April 21.

AN APHID (Lachnus sabinæ Gill.)

Virginia. A. M. Woodside (April 22): Some heavy infestations of a large, dark red aphid, probably L. sabinæ, observed on Irish juniper in Staunton.

LILY AND NARCISSUS

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Mississippi. C. Lyle (April 21): Infested bulbs received from Newton on April 4.

Nebraska. M. H. Suenk (April 20): Lily plant from Dodge County found to be infested on March 31.

A NOCTUID (Xanthopastis tinais Cram.)

Georgia. C. A. Weigel (April 20): Specimens feeding on narcissus at Savannah on April 12. (Det. by C. Heinrich.)

Mississippi. C. Lyle (April 21): Larvae found feeding on lilies growing wild near State College.

LILAC

LILAC BORER (Podosesia syringæ Harr.)

Michigan. R. Hutson (April 22): Prevalent at Farmington.

MAGNOLIA

MAGNOLIA SCALE (Neolecanium cornuparvum Thro)

Louisiana. T. E. Snyder (April 20): Magnolia soft scale injurious to ornamental deciduous magnolia trees on lawns in New Orleans. Branches killed.

A SCALE (Toumeyella turgida Ckll.)

Mississippi. C. Lyle (April 21): Specimens received from Forrest, Marion, and Pike Counties. Found infesting Michelia fuscata.

NINEBARK

AN APHID (Myzus sp.)

New Jersey. M. D. Leonard (March 11): Aphids from leaves of ninebark, Physocarpus opulifolius, at Ridgewood. (Det. by P. W. Mason.)

OLEANDER

OLEANDER SCALE (Aspidiotus hederæ Vallot)

Mississippi. C. Lyle (April 21): Oleander leaves infested with this scale received from West Point on April 3.

ORCHID

A STEM MINER (Agromyza virens Loew)

Florida. G. W. Barber (April 18): Several specimens received of a small fly, the larvae of which feed in the flower stems of an orchid, native to the extreme southern part of the Everglades. A collector of native orchids states that, both in his nursery at Homestead and in the wild, this fly is so abundant that very few blossoms of this orchid survive. According to him the orchid is being destroyed in the wild since it is unable to produce seed. This condition has been observed only recently. (Det. by C. T. Greene.)

RHODODENDRON

RHODODENDRON BORER (Conopia rhododendri B&utm.)

Pennsylvania. E. P. Felt (April 22): Observed in small numbers in the Philadelphia area.

AN AMBROSIA BEETLE (Corthylus punctatissimus Zimm.)

New York. E. P. Felt (April 22): Pitted ambrosia beetle moderately numerous in a rhododendron planting at White Plains.

ROSE

ROSE SAWFLY (Caliroa aethiops F.)

Virginia. C. R. Willey (April 22): First signs of oviposition found at Richmond on April 15.

THRIPS (Thysanoptera)

Florida. J. R. Watson (April 22): Numerous complaints received of Frankliniella cephalica Crawford on roses.

Mississippi. C. Lyle (April 21): Specimens of thrips on rose received from Bay St. Louis, Hancock County, on April 10.

ROSE APHID (Macrosiphum rosae L.)

South Carolina. J. G. Watts (April 14): Aphids, probably this species, very abundant on rose blossoms at Blackville. Apparently responsible for the blossoms failing to open.

Mississippi. E. W. Dunnam (April 10): Green aphids very numerous on rose buds in Leland.

ROSE MIDGE (Dasyneura rhodophaga Coq.)

Michigan. E. I. McDaniel (April 19): Reported from a Lansing greenhouse, where, for the first time in a number of years, it is causing considerable loss.

STRAWBERRY LEAF-CHAFER (Diplotaxis frondicola Say)

Mississippi. C. Lyle (April 21): Adults of this leaf feeder sent in early in April from Laurel and Lucedale, with information that they were feeding on rose and other plants.

SNOWBALL

SNOWBALL APHID (Aphis viburnicola Gill.)

New Jersey. M. D. Leonard (April 9): Stem mothers just starting to hatch from overwintering eggs, which were fairly common on a large snowball bush at Haddonfield.

I N S E C T S   A T T A C K I N G   M A N   A N D

D O M E S T I C   A N I M A L S

MAN

FLEAS (Siphonaptera)

General. E. C. Cushing (April 25): Fleas resuming activities out of doors, according to reports from suburban District of Columbia and nearby Maryland and Virginia. Increasing abundance first noted around April 1. Specimens determined as Ctenocephalides felis Bouche, C. canis Curt., and Pulex irritans L. (Det. by Helen L. Trembley.)

BEDBUG (Cimex lectularius L.)

Nebraska. M. H. Swenk (April 20): Reported on March 29 as infesting a house in Hall County.

Oklahoma. F. A. Fenton (April 21): Reported from Oklahoma City.



## MOSQUITOES (Culicinae)

Utah. G. F. Knowlton (April 20): Mosquitoes reported as appearing in northern Utah.

Oregon. H. H. Stage (March and April): First larvae of Theobaldia incidens Thoms. observed in artificial containers at Portland on March 28. Third-instar larvae of Aedes vexans Meig. taken at Portland on April 7. Not associated with flood-water conditions but in rain pools. (April 14): First larvae of Anopheles maculipennis Meig., A. punctipennis Say, and Culex tarsalis Coq. found in Multnomah County during the last few days.

## TROPICAL RAT MITE (Liponyssus bacoti Hirst)

California. H. J. Ryan (April 14): Reported on persons at Hollywood and Los Angeles on March 30. (Det. by H. H. Keifer.)

## ROCKY MOUNTAIN SPOTTED FEVER TICK (Dermacentor andersoni Stiles)

Idaho. J. R. Douglass (April 8): Reported from the Snake River Plains that this tick is very numerous in southern Idaho this spring.

## AMERICAN DOG TICK (Dermacentor variabilis Say)

Delaware. E. C. Cushing (April 25): On April 24, two specimens were received from Harbeson, where they were found on a man's clothing. (Det. by Helen L. Trembley.)

Maryland and Virginia. E. C. Cushing (April 25): Reports received since the first week of April relative to occurrence of this tick in Maryland and Virginia near Washington, D. C. (Det. by Helen L. Trembley.)

Tennessee. E. C. Cushing (April 25): Specimens received from around Knoxville. Collected since April 8. (Det. by Helen L. Trembley.)

Georgia. A. L. Brody and E. E. Rogers (April): On April 6 one male and one female were removed from sheep at Valdosta. More ticks of this species removed from sheep at Valdosta on April 13.

## CATTLE

### BITING MIDGES (Simuliidae)

Tennessee. G. M. Bentley (April 19): Reported on April 9 as causing considerable damage in counties in western Tennessee, where water has been high. Some livestock killed and control measures being used by farmers.

Utah. G. F. Knowlton (April 22): Biting midges very annoying to man; females (Simulium sp.) abundant at lights in northern Utah.

## SCREWORM (Cochliomyia americana C. & P.)

Georgia. A. L. Brody and E. E. Rogers (April 20): Infestations on cows at Valdosta

were reported on March 25 and April 7, and one on a hog on April 13.

Florida. F. S. Chamberlin (April 20): Reports from stock raisers in Gadsden County indicate that screwworm (Cochliomyia sp.) is abundant at present.

Texas. D. C. Forman (April 25): A very low population in the area from Uvalde to the Devil's River up to April 15, approximately 25 percent of last year's infestation. Center of infestation apparently in the Brackettville district, and only 4 screwworms taken in the trap there in the period ended April 15. The only traps taking C. americana during the year up to April 15 were at Uvalde, Camp Wood, Brackettville, and Castle Canyon, none having taken more than 10 flies per trapping period during that time. None taken in traps at Langtry, Sanderson, Fort Stockton, McCamey, Sheffield, Ozona, Junction, San Saba, or Llano this year. No adults taken in the Fredericksburg trap since last October, nor in the De Hanis trap since September 1936. Light infestation present in the lower Rio Grande and Gulf coast areas. In the trapping period ended March 31, 81 adults were taken at Alice; 72 at San Perlita; 39 at Encino; 20 at Laredo; 10 at Sinton; and 4 at Catarina. No adults taken at San Marcos, Cuero, or Victoria.

#### A CATTLE GRUB (Hypoderma sp.)

Iowa. H. E. Jaques (April 24): Report of an unusual infestation of ox warble in cattle in Hardin County.

#### SHORT-NOSED CATTLE LOUSE (Haematopinus eurysternus Nitz.)

Texas. O. G. Babcock (April 25): On April 17 the short-nosed ox louse showed up on several ranches at Sonora, the first year this louse has been observed that far south by the reporter.

#### TICKS (Amblyomma spp.)

Georgia. A. L. Brody and E. E. Rogers (April 20): At Valdosta Gulf coast ticks (A. maculatum Koch) were removed from the ears of sheep on April 6 and 13.

Mississippi. C. Lyle (April 21): Specimens of A. americanum L. sent in on April 12 from Jones County.

#### POULTRY

##### FOWL TICK (Argas miniatus Koch)

Oklahoma. F. A. Fenton (April 21): Reported from Purcell, in the south-central part of the State.

#### SWINE

##### HOG LOUSE (Haematopinus suis L.)

South Carolina. J. G. Watts (April): Abundant on hogs at one farm near Blackville for 2 years. Several apparently successful clean-ups of the adults have been made during this period but the population builds up again within a few months.

MISCELLANEOUS ANIMALS

A MITE (Ptilonyssus sp.)

New Jersey. E. C. Cushing (April 25): Mites taken from the tracheae of canaries on March 15. Mite found in about two-thirds of the birds autopsied after a lung illness at a commercial canary company at Denville, N. J. (Det. by H. E. Ewing.)

A SUCKING DOG LOUSE (Linognathus setosus -Olfers)

Connecticut. G. H. Plumb (March 23): Adults and nits very abundant on dog at New Haven; some dead adults and nits in baby's crib. Puppy ordinarily allowed to play in crib with baby.

RABBIT TICK (Haemaphysalis leporis-palustris Pack.)

Georgia. (April 20): Fully engorged and partly engorged ticks removed from ears and body of a swamp rabbit on April 10 at Valdosta.

BLACK-LEGGED TICK (Ixodes ricinus scapularis Say)

Georgia. A. L. Brady and E. E. Rogers (April 20): Engorged females removed from a sheep at Valdosta on April 6.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

TERMITES (Isoptera)

Connecticut. N. Turner (April 19): Flights of Reticulitermes flavipes Koll. have occurred for the last month in the usual numbers. Many modern buildings seriously damaged.

Pennsylvania. H. E. Hodgkiss (April 19): Termites reported as giving considerable trouble in Philadelphia and Delaware Counties, and a number of requests for assistance received from the Pittsburgh area, the result of winged individuals being noticed. Record made on March 30 in the southeastern part of the State.

New Jersey. J. C. Silver (April 15): Requests for identification and control of termites (R. flavipes) sent in daily from Bergen, Hudson, and Essex Counties, northern New Jersey, since March 27, the date of the first migration brought to our attention this year.

Delaware. L. A. Stearns (April 3): Termites reported as infesting a church at Newark. Extensive repairs necessary.

Maryland. E. N. Cory (April 24): Infesting houses in Baltimore, Cecil, and Prince Georges Counties.

North Carolina. Z. P. Metcalf (April 27): Termites infesting house in Durham.



D. L. Wray (April 19): A heavy infestation of R. flavipes found doing considerable damage to English laurel at Greensboro. Most of the plants previously damaged by peach borer (Conopia exitiosa Say).

Tennessee. L. B. Scott (April 14): Many swarms of termites reported late in March and early in April in Montgomery County, north-central Tennessee, in normal abundance.

Ohio. T. H. Parks (April 24): Complaints submitted almost daily of termite trouble in houses. Abundance normal.

Michigan. E. I. McDaniel (April 19): Termite flights recorded from Baroda, Grand Haven, Grass Lake, Grand Rapids, Jackson, and Hillsdale.

Missouri. A. C. Burrill (April 3): Despite 2 to 6 years of drought and of control treatments, the Jefferson City area is heavily infested every year with R. flavipes.

Nebraska. M. H. Swenk (April 20): R. tibialis Banks reported as attacking rhubarb leaves in Nuckolls County on April 17, and found damaging a lily plant in Dodge County on March 29. House in Douglas County reported as infested on April 9.

Oklahoma. F. A. Fenton (April 21): Termites, probably R. flavipes, reported in Geary, Shawnee, Oklahoma City, Walter, and McLoud.

Iowa. C. J. Drake (April 25): Letters regarding termite injury to wood received from Mystic, Boone, Mason City, Red Oak, Ottumwa, Ogden, and Rockwell City. At Ogden examination of an infested residence revealed many of the timbers almost entirely destroyed.

Utah. J. C. Hamlin (March 29): Termite injury to residential property in Salt Lake City reported in March by several persons.

Nevada. G. G. Schweis (April 24): Subterranean termites reported as infesting several residences in Reno.

Washington. M. H. Hatch (April 6): Zootermopsis angusticollis Hagen reported as injuring the wooden structure of a residence in Olympia.

#### ANTS (Formicidae)

Connecticut. N. Turner (March 27): Paratrechina longicornis Latr. generally prevalent in a large hotel at New Haven. (Det. by M. R. Smith.)

Florida. G. B. Merrill (April 18): Specimens of Wasmannia auropunctata Roger taken at Apopka and Winter Garden, central Florida. (Det. by M. R. Smith.)

Mississippi. C. Lyle (April 21): Specimens of Argentine ant (Iridomyrmex humilis Mayr) received on March 28 from a farm in Yazoo County. Specimens of the fire ant Solenopsis xyloni McCook received from Noxubee, Clay, and Sunflower Counties, and reports from Leflore County as causing injury in gardens and houses.

Missouri. A. C. Burrill (April 17): A regular trail of Prenolepis imparis Say observed at Jefferson City, Cole County, in wet, very cold weather. Occasionally Crematogaster lineolata Say bores the pith area of elderberry for a succursal nest.

Nebraska. M. H. Swenk (April 20): Report received from Adams County on April 11 indicated that ants were infesting a house. Specimens of Camponotus fallax Nyl. brought in from Hamilton County on April 7. Reported as infesting a house.

FIELD CRICKET (Gryllus assimilis F.)

Nebraska. M. H. Swenk (April 21): Reported as annoying in a dwelling in Polk County on March 22.

ORIENTAL COCKROACH (Blatta orientalis L.)

Connecticut. N. Turner (April 19): Becoming more abundant in Connecticut. About 50 specimens received from a small store in Bridgeport.

BOXELDER BUG (Leptocoris trivittatus Say)

T. H. Parks (April 24): Specimens received in March from Mercer, Anglaize, and Butler Counties, all near the western border of the State, with the statement that they were found in houses.

Michigan. E. I. McDaniel (April 19): Abundant in the vicinity of Ypsilanti. In some places observed swarming into houses and giving considerable trouble.

Iowa. C. J. Drake (April 25): Very abundant this spring. Reports received from Council Bluffs, Centerville, Adel, and Gifford.

Nebraska. M. H. Swenk (April 20): Complaints of annoyance received from March 21 to April 20, chiefly from Boyd, Knox, Madison, Polk, Colfax, Buffalo, York, Lancaster, Gage, and Douglas Counties.

Utah. J. C. Hamlin (March 29): Bugs have emerged from hibernation with the advent of warm weather in March and have begun troubling householders in Salt Lake City.

SPIDER BEETLES (Ptinus spp.)

Utah. G. F. Knowlton (March 31): Specimens sent in from Tooele, Tooele County; considered injurious. (Det. by W. S. Fisher.)

Washington. M. H. Hatch (April 10): Specimens of Ptinus tectus Boieldieu reported as infesting a residence in the Magnolia Bluff district of Seattle.

POWDER-POST BEETLES (Lyctus spp.)

New Jersey. R. A. St. George (April 5): Two reports of planicollis Lec. as attacking newly erected residences at Waldwick sent in on March 27. Some boards so badly infested that new floors had to be laid.

Maryland. E. N. Cory (April 12): L. planicollis reported in a house in Baltimore. (Det. by W. S. Fisher.)

California. P. Simmons (April 5): Emergence holes of L. cavicollis reported as appearing in several areas of an oak floor laid 2 years ago at Fresno. A few holes apparent a year ago; now several dozen holes in the boards. (Det. by W. S. Fisher.)

A CERAMBYCID (Chlorophorus annularis F.)

Michigan. R. A. St. George (April 8): Infested bamboo rake handles sent in from southwestern Grand Rapids on October 24, 1938. Three adults reared. (Det. by W. S. Fisher.)

TULE BEETLE (Agonum maculicolle Dej.)

California. P. Simmons (April 4): Specimens received from Avenal, a new town in Kings County, near the Kettleman Hills oil field, with statement that homes are being invaded nightly. This insect usually causes trouble in the fall, the present instance being the first spring movement into homes that has come to our attention.

A WHARF BORER (Nacerda melanura L.)

New Jersey (March): Considerable untreated piling damaged above the highwater mark by the wharf borer, at the south end of Staten Island on the Arthur Kill River.